1

An introduction to inflation accounting

1 Introduction

The scope and context of this book were described in the Preface. The object of this chapter is to give a broad survey of the problems which will be analysed in more detail in subsequent chapters. Firstly, we shall briefly discuss accounts and their uses, and then we shall consider the nature of inflation and its impact on accounts. The variety of methods of ‘inflation accounting’ which have been proposed will then be illustrated by means of a simple numerical example and the quantitative importance of various adjustments will be illustrated using recent British data. Finally, the course of the argument of the rest of the book will be outlined.

2 Accounting

Accounting can be defined broadly as the provision of information relating to economic transactions. For present purposes, we shall narrow this to exclude the special problems of national income accounting and of non-business organisations. We shall be concerned primarily with the accounts of business enterprises, and the field will be further narrowed by being concerned only with the financial accounts and not with the management accounts of these organisations. Financial accounts are the financial statements which have traditionally been drawn up on a periodic basis, usually for a year or six months, mainly for the benefit of the providers of finance of the firm, i.e. the shareholders and the creditors in the typical case of a company. As we shall see, the range of users and uses has widened in recent years. Management accounts are prepared for the internal use of the managers of the firm, to help them with their decision-making and control activities. The range of management
An introduction to inflation accounting

accounting information is very broad and its form is not specified by statute, so that management accounting practice is more heterogeneous than that of financial accounting. The correct treatment of inflation accounting in management accounts is obviously important, because misleading information could lead to bad management. The reason for avoiding special analysis of management accounting problems here is merely one of simplicity: financial accounting has quite enough problems to suffice for present purposes.²

A number of important decisions are based on financial accounts. Traditionally, these include the decision by the directors of a company to declare dividends, the decision by a potential creditor to lend to a firm, the decision by an investor to buy (or to sell) shares in a company, and the decision by a shareholder to support the present management by re-electing directors. During the twentieth century, an increasingly important use of financial accounts has been as a means of establishing the basis for company taxation. Although the tax base usually involves the adjustment of amounts reported in the financial accounts, such as depreciation charges, to comply with special rules laid down in the tax statutes, taxation has nevertheless played an important part in the debate on inflation accounting, because it is always possible that a convention adopted for accounting purposes will be accepted for tax purposes. A recent example of this has been the Stock Relief, granted in Britain in 1974 as a temporary relief against Corporation Tax, pending the introduction of a system of inflation accounting. Ironically, when a system of inflation accounting was finally implemented by the Accounting Standards Committee in 1980, it was not used as the basis of the new stock relief scheme (introduced in the 1981 budget).

In recent years, increasing stress has been laid on the use of financial reports for users of accounts other than the providers of finance. Evidence of this will be found in the reports of two professional committees, The Trueblood Report (1973) in the USA and The Corporate Report (Accounting Standards Steering Committee, 1975) in the UK, and in two official government publications in the UK, the Sandilands Report (1975) and the Green Paper, The Future of Company Reports (Secretary of State for Trade, 1977). Prominent amongst these users are employees, who may wish to use reported profits as evidence that their employers can afford wage increases, and who may also wish to use financial reports to assess their future
employment prospects. Government also has a substantial interest in financial accounts as providing information for economic policy decisions. For example, during periods of price restraint, profits reported in the accounts have been used as evidence relating to pricing policy, price increases being allowed only if they are necessary for the achievement of an adequate profit. The monopolies and restrictive practices legislation also allows the use of reported profits as one criterion to be considered in assessing whether the consumer is being over-charged.

These examples of the range of uses of financial accounts should serve to demonstrate that financial accounting is an important activity, because important economic decisions may rest partly on the use of the information which it provides. Thus, the adjustment of financial accounts for the effects of inflation is also potentially important, since it can influence such important matters as the levels of taxation, dividends, wages and prices. It is therefore not surprising that the debate on different methods of inflation accounting has been a very spirited one, despite the superficial appearance of the subject as being somewhat dry and technical. The choice of inflation accounting technique can affect the allocation of resources, and the various affected parties have a strong incentive to support the particular technique which seems to favour them most.

Before discussing inflation and its effects on accounts it is important to consider another implication of the widening range of uses of accounting information. It is unlikely that one piece of information, such as a single profit figure, will meet all of the wide variety of needs which financial accounting is meant to satisfy. For example, it is not necessary that the measure of profit used for tax purposes should be the same as that used for setting an upper limit to the dividends which can be distributed to shareholders: the fact that taxable profit and distributable profit differ under current British legislation is evidence of this. Despite this, the debate on inflation accounting is bedevilled by the implicit belief on the part of many participants that a single number can be found which will provide ‘all the answers’. This problem is compounded by the fact that most of the individual questions potentially have a number of answers: for example, it is by no means clear that corporation tax should be based on profits rather than net payments to shareholders, and it seems that the dividend decision should be constrained by consideration of measures of liquidity as well as of profitability.
An introduction to inflation accounting

3 Inflation

Inflation may be loosely defined as a decline in the purchasing power of money, due to an increase in the general level of prices. It has been experienced throughout history, e.g. as a result of currency debasement, or, as in the sixteenth century, when gold from America was imported into Europe. Inflation has been a particularly acute problem in the twentieth century, when the reliance on fiat money has combined with increasing demands on government expenditure, often financed by borrowing rather than taxation, to make inflation the typical condition in many economies. In some countries, such as Germany after the First World War and certain Latin American countries in more recent years, inflation has reached extremely high levels which amounted to a collapse in the value of the currency and has followed or been followed by serious political problems. More often, inflation has been at more moderate rates which nevertheless have important economic consequences (e.g. at average annual percentage rates of 20 per cent or less). During the 1970s, particularly following the oil crisis of 1973, inflation increased on a world-wide scale and many countries, including the United Kingdom, experienced sustained inflation at levels (typically greater than 10 per cent per annum) previously unknown in times of peace. Evidence of recent inflation rates in market economies (as opposed to centrally planned economies) is given in Table 1.1. In the United Nations, World Economic Survey 1979–1980, Table III-1. The numbers are annual percentage point increases.
An introduction to inflation accounting

The price level approximately quadrupled between 1969 and 1981.

We have implicitly made the common assumption that inflation is approximately measured by changes in a broadly-based consumer price index, which reflects the general level of prices. However, such an index represents the cost of living (and its inverse, the purchasing power of money) strictly only for an individual who buys commodities in proportion to their weighting in the index. For others, the index is an approximation whose accuracy will be reduced to the extent to which their expenditure pattern diverges from that assumed by the index and the prices of the divergent expenditures change out of proportion with the index. For example, a non-smoking, teetotal vegetarian might consider inappropriate to his needs a consumer price index which includes tobacco, alcohol and meat, in periods when this group of commodities varies in price relative to the other commodities which are in the index, and which he does consume in the same relative proportions as they are represented in the index. 7

This type of objection assumes less importance at higher rates of inflation, at which most prices tend to move upwards and, for all but the most perverse of consumers, fiat money tends to be a less satisfactory measure of purchasing power than a ‘real’ unit calculated by reference to a broadly-based index. Thus, it is not a coincidence that it has been in countries with persistently high rates of inflation, such as Brazil, that the use of general indices to alleviate the distortionary measurement effects of inflation has been most popular. In countries with lower inflation rates, there has been more controversy about the usefulness of measuring inflation by the use of general indices. In Britain, for example, the Report of the Sandilands Committee (1975), an official government committee of enquiry into inflation accounting, came to the conclusion that ‘inflation is not a phenomenon capable of objective measurement affecting all individuals and entities equally’ (para. 48) and used this as an argument to justify the complete rejection of the use of general indices in the system which they proposed, their system being based solely on specific price changes.

If we can, for the present, ignore the difficulties of measuring the general price level, we can make important conceptual distinctions between the general price level, specific prices and relative prices. The general price level is a measure of the purchasing power of
An introduction to inflation accounting

money, as represented by some general index. Specific prices are the observable prices of specific goods and services. These specific prices may change relative to one another and to the general price level. If a specific price changes over a period, we may divide the change into two components, that which is due to changes in the purchasing power of money in general (provided we can measure it), and that due to the change in the price of the specific commodities relative to that of other commodities, the ‘real’ increase in the price of the specific commodity. Thus, if the price of a specific commodity rose from £10 to £15 in a period in which the general price level rose by 20 per cent (the rate of inflation), we might attribute £2 of the increase to inflation and £3 to a relative price change. These distinctions are important components of some systems of inflation accounting.

4 Inflation and accounts

Since accounts are concerned with the measurement of economic activity and inflation affects the value of the conventional unit of measurement, the currency unit, inflation can clearly have an important effect on accounts. This is especially so in the case of accounts prepared on the traditional historical cost (HC) principle, in which assets and liabilities are recorded at their nominal values at the time of acquisition rather than their current values. In times of inflation, current monetary values are likely to exceed historical values by considerable amounts. Equally, when measuring income, the monetary value of the capital which must be maintained by a business before recognizing a profit (i.e. the amount of capital which will maintain the business, or its proprietors, as ‘well off’ at the end of a period as it was at the beginning) will also need to reflect inflation and does not do so on the traditional historical cost convention.

It is these problems which are at the root of the fierce debates which have taken place in recent years over such issues as whether the increase in the nominal (i.e. monetary rather than real) value of stocks held by companies (‘stock appreciation’) should be regarded as profit, and whether firms which are financed by borrowing have made a ‘gain on borrowing’ as a result of inflation, because they are able to repay their loans in currency units whose purchasing power has depreciated. These issues will be taken up in more detail in later chapters. The next section of this chapter gives an introduction to (but not a complete survey of) the techniques of inflation account-
An introduction to inflation accounting

...ing, by means of a simple numerical illustration, and the following section offers some quantitative evidence as to the practical importance of the choice between alternative methods. Both the numerical illustration and the quantitative evidence will show that our assessment of the profitability of an individual business, and of business in general, can be changed radically by our choice of accounting method.

5 A numerical illustration

This numerical example was inspired by a leading member of the accounting profession who, in an address to a group of industrial accountants, attempted to justify the system of current cost accounting (CCA), recently enforced by the Accounting Standards Committee, in the following terms:

‘It’s all quite simple really. Imagine old Fred, who’s a street trader. One morning he goes to the wholesale market and buys a hundred pineapples for £1.00 each. He sells them for £1.50 each so he works out his profit for the day by the traditional historical cost method, as:

<table>
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<tbody>
<tr>
<td>Sales</td>
<td>150</td>
</tr>
<tr>
<td>Less Historical cost of goods sold</td>
<td>100</td>
</tr>
<tr>
<td>Profit</td>
<td>50</td>
</tr>
</tbody>
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He feels that he has had a successful day and goes to the pub and spends his £50 profit. The next day, he arrives at the wholesale market and finds that, when he was selling his pineapples the previous day, the wholesale price had risen to £1.25. He looks into his pocket and realises that he has only £100 to spend, so that he can’t replace his stock of 100 pineapples: he can only afford 80 pineapples. On the other hand, if he had done current cost accounting, he would have calculated his profit after charging the current replacement cost of his pineapples:

<table>
<thead>
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<tbody>
<tr>
<td>Sales</td>
<td>150</td>
</tr>
<tr>
<td>Less Current cost of goods sold</td>
<td>125</td>
</tr>
<tr>
<td>Profit</td>
<td>25</td>
</tr>
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</table>
An introduction to inflation accounting

He would then have spent only £25 in the pub, and he would have preserved enough cash to maintain his capital stock of 100 pineapples.’

This simple tale was no doubt adequate for its purpose of communicating the spirit of current cost accounting, and our object is not to offer carping criticism of it, but to demonstrate a few implicit assumptions which lie behind even this simple and apparently innocuous problem. Before doing this, it should be noted that financial accounting is normally concerned with periods greater than one day, but those who are dissatisfied with this can pretend that the period is a year rather than a day. Equally, those who find Old Fred and his pineapples a rather unimportant corner of the economy can pretend that Old Fred is their favourite oil company and that the figures are expressed in millions of pounds. A more serious objection to the example is that Old Fred holds only cash at the end of the day, whereas most companies hold fixed assets and stocks of goods: we shall return to this problem later, when it will be shown to add to the variety of answers which are available to the problems of inflation accounting. Now, let us turn to an analysis of Old Fred’s problem, beginning with some objections which might be raised against the case which was made out for Current Cost Accounting (CCA), over the traditional Historical Cost (HC) method.

Firstly, Fred might well object that he started the day with £100 in cash and ended with £150. Surely, then, he has gained an income of £50 which he is entitled to spend, leaving himself as well off at the end of the day as at the beginning, with £100. After all, he did not actually spend the £125 charged as cost of goods sold under the current cost accounting system.

The reply to this, by the advocates of CCA, is that the difference between the £100 actually paid and the £125 is a holding gain, the rise in the cost of his stock of pineapples between when he bought them and when he sold them. This is Fred’s reward for buying early when prices were lower, rather than later, when they were higher. It should not be regarded as part of his profit, but rather as a ‘capital gain’; something which must be preserved (rather than being spent in the pub) if he is to maintain the substance of his business (100 pineapples).

Fred’s reply to this might well be that he does not care about maintaining a stock of pineapples: he is in business to make money, not to accumulate a heap of perishable stock. Furthermore, if
An introduction to inflation accounting

pineapples have become relatively expensive in the wholesale market and the retail price has not risen proportionately, he might prefer to switch to oranges, or some other potentially more profitable line, and his £100 might buy even more oranges today than it did yesterday.

It thus transpires that our CCA advocate supports the ‘entity’ view of the business: its specific physical substance, either in terms of assets or that seductive but elusive concept ‘productive capacity’, must be maintained before we recognize an increase in the value of the assets of the business as giving rise to a profit which is regarded as a suitable object for distribution (as dividends in the case of an oil company, at the pub in the case of Fred) or taxation. This point of view has been associated, in the recent debate on inflation accounting, with Messrs Merrett and Sykes, who have a number of eloquent and influential pleas for a concept of physical capital maintenance, based upon the need to protect the operating capacity of British industry against the ravages of taxation and excessive dividends which might result from the ‘paper profits’ reported by traditional accounts in a period of inflation. This concept has a natural appeal for managers and other employees whose jobs may depend upon the preservation of the operating capacity of the business.

Fred, on the other hand, is an advocate of the ‘proprietary’ view of the business, which is not surprising, since he is the proprietor. This views the business as a financial fund administered by the management for the benefit of the proprietors, who provide the finance. On this view, the objective of the business is not to maintain its productive capacity, but to maximise the wealth of the proprietors, and a profit is an increase in the wealth of the proprietors. The dispute between these two points of view explains a great deal of the controversy on inflation accounting and will be discussed further in Chapter 6, but we must, having raised the issue, pass on to yet further complications.

It will be observed that the example so far has not taken any account of inflation in the sense described in the previous section of this chapter. If we assume that inflation was zero, or negligible, during the period (which is plausible if we assume it to be a day), then no adjustment is necessary. Thus, CCA cannot be simply a system of inflation accounting, since it produces different figures from those of traditional HC even when there is no general inflation. This is because CCA deals with specific price changes, which, as we found
An introduction to inflation accounting

ev earlier, can be due to general price level changes (inflation or deflation) or to relative price changes, or both. If we assume no inflation, our example is one solely of relative price changes (pineapples relative to other goods).

At the other extreme, we might assume that the rise in the price of Fred’s pineapples was attributable entirely to general inflation: this is more plausible if we assume that the period is a year rather than a day, although high daily rates of inflation have occurred, e.g. in the German hyper-inflation of 1923. In such a case, we might say that Fred was wrong, even on his own ‘proprietary’ assumptions, because he failed to take account of the declining value of the monetary unit. His wealth in this case can be measured in pineapples, since they represent constant command over other goods and services. After maintaining this wealth intact, he has £25 left over to spend, and, incidentally, these current pounds will buy him only four fifths of the number of pints of beer which they would have bought before the inflation price rise.

However, it is more plausible to assume that inflation exists but at a rate different from that of the change in the price of a specific commodity, such as pineapples. In such a case, Fred should aim to maintain his ‘real’ wealth, i.e. his command over goods and services in general (not pineapples specifically) before recognizing a profit, if he takes the proprietary view. Thus, if we assume that inflation took place at 10 per cent, we would regard Fred’s closing capital requirement as £110 and his profit as £40. His profit calculation could be re-cast as follows:

\[
\begin{array}{l}
\text{Sales} & \£ 150 \\
\text{Less Historical cost of goods sold, in current £s} & \£ 110 \\
\text{Profit} & \£ 40 \\
\end{array}
\]

The purchases have been re-stated to allow for the fact that, since purchase, the £ has effectively been devalued in terms of its general purchasing power, so that the cost of the original purchases expressed in current £s must be increased to be equivalent (£100 × 110/100). This is an example of Constant Purchasing Power (CPP) accounting, as advocated by the accounting profession in 1973.

An alternative way of presenting this would be: